

## ABSTRACT

1 A method for determining formation resistivity anisotropy in a wellbore environment.  
2 The method of the present invention effectively extends the dynamic range of the existing  
3 well logging service of the multi-component induction tool, allowing the use of this  
4 service in wells drilled with conductive WBM systems. A sequential inversion  
5 processing of galvanic array lateral log HDLL/MLL data or DLL/MLL and also multi-  
6 component induction log (3DEX<sup>SM</sup>) data is used. The formation resistivity structure of  
7 the near wellbore environment is determined using the galvanic measurements of the  
8 array lateral log tool. The formation resistivity anisotropy of the undisturbed zone is  
9 determined using the result of the inversion of the galvanic array data and inversion of  
10 measurements of the multi-component induction tool